

Completed Return on Investment Project Case Study

United States Department of Energy
Office of Environmental Management
Fact Sheet

Installation of Sump Computer Monitoring Equipment Los Alamos National Laboratory

Original Problem

The accumulated water in the sumps belonging to DX Division must be pumped out with a tanker truck and sent to a high explosive water treatment facility. Since the sumps are located at low points on the site, an estimated 200,000 gallons of snowmelt and rain per year were entering the sumps and raising the cost of waste disposal. The old system that monitored the water levels in the sumps was not very robust inside the damp environment, and it often triggered the alarm light falsely. The false positives wasted a lot of inspection time.

The Project Solution

A new monitoring system was installed in the sumps, and in addition to triggering an alarm at a specified water level, the system will phone the responsible individuals if the alarm level is reached at night or during a weekend. The water levels can be checked at any time with office computers or a telephone.

Value of Improvement

The new monitors work better in the damp environment and do not cause false positives. The monitors will help the staff pinpoint leaking inlet pipes in the sump system, and then the leaks can be mended so that no rain or snowmelt will accumulate with the waste water.

Lifecycle Waste Reduction	
Lifecycle Waste Reduction	200,000gal/yr.
Commencement Date	1999
Project Useful Life (Years)	10



DOE Monetary Benefits

Total Project Cost	\$26,000
Lifecycle Savings	\$66,500 / year
Return on Investment	69%

Benefits At-A-Glance

- The monitors work in damp conditions, do not trigger false positives, and let the water levels be checked at any time.
- The new monitors help identify leaks in inlet pipes that should be repaired.
- Once the leaks are repaired, an estimated 200,000 gallons of rain and snowmelt per year will no longer accumulate in the sumps, saving about \$66,500.

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Summary Data	
Priority Area:	Waste Minimization Projects
Project Type:	Source Reduction
Total Project Cost:	\$26,000
Lifecycle Savings:	\$66,500 per year (estimated)
Implementing Group:	DX-2
Benefiting Group:	DX Division
Useful Life Years:	10
Return on Investment:	69%
Lifecycle Waste Reduction:	200,000 kg of waste water per year (estimated)
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